

**DETERMINATION OF ORGANOCHLORINE AND
ORGANOPHOSPHATE PESTICIDES IN THE
SOIL AND WATER OF A PADDY FIELD
AT SEKINCHAN, SELANGOR**

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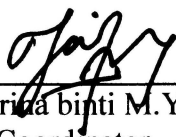
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This Final Year Project Report entitled “**Determination of Organochlorine and Organophosphate pesticides in Soil and Water of a Paddy Field at Sekinchan, Selangor**” was submitted by Nur-Ain Abu Bakar, in partial fulfillment of the requirements for the degree of bachelor Science (Hons.) Applied Chemistry, in the Faculty of Applied Sciences, and was approved by



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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
LIST OF ABBREVIATIONS	viii
ABSTRACT	ix
ABSTRAK	x
 CHAPTER 1 INTRODUCTION	
1.1 Background and Problem Statement	1
1.2 Significance of Study	3
1.3 Objective of Study	4
 CHAPTER 2 LITERATURE REVIEW	
2.1 Pesticides	5
2.2 Behavior of Pesticides in soil and water	8
2.3 Location of Sampling (study area)	10
2.4 Case study- Pesticides in Paddy	13
2.5 Contaminant of Pesticides that cause water pollution	14
2.6 Different methods of extraction and identification of pesticides	
2.6.1 SPE and GC-ECD	15
2.6.2 LLE and GC-MS	16
2.6.3 HLLE and GC-ECD	16
2.6.4 LPME and GC-MS	17
 CHAPTER 3 METHODOLOGY	
3.1 Material	
3.1.1 Raw material	19
3.1.2 Chemicals	19
3.1.3 Apparatus	19
3.2 Method	
3.2.1 Method Sampling	20
3.2.1.1 Soil sample	20
3.2.1.2 Water sample	21
3.2.2 Sample Extraction	
3.2.2.1 Soil	22
3.2.2.2 Water	23

ABSTRACT

DETERMINATION OF ORGANOCHLORINE AND ORGANOPHOSPHATE PESTICIDES IN SOIL AND WATER OF A PADDY FIELD AT SEKINCHAN, SELANGOR

The pesticides selected for this study are chlorpyrifos, diazinon, heptachlor and lindane. A random method of sampling for soil and water samples was adopted at a selected paddy field at Sekinchan, Selangor by using a soil probe for soil samples and a grab sampler for water samples. The soil and water samples were homogenized using methanol and then eluted by n-hexane in solid phase extraction. The samples were subsequently analysed by GC-ECD. From the results only chlorpyrifos was detected, namely 0.5358ng/ul in soil samples and 0.9482 ng/ul in water samples. The percent recovery in soil samples is 89.51% and 72.18% in water samples. Other selected pesticides were not detected in the soil and water samples. To determine the residual pesticides from the paddy field plot to the water canal and then to Sg.Selangor, five samples of water were collected at different locations. It is observed that chlorpyrifos disappeared gradually toward Sg.Selangor. The final concentration of chlorpyrifos in the Sg. Selangor is 0.0507ng/ul, which is under the allowable limit of 0.08ng/ul by the Interim Natural Water Quality Standard for Malaysia.